

***MONTANA DEPARTMENT OF  
ENVIRONMENTAL QUALITY***

***PUBLIC WATER SUPPLY SECTION***

**☆ Community Summary ☆**

Drinking Water Regulations for Community Public Water Supplies

September 21, 1999

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## PUBLIC WATER SUPPLY SECTION

### ◆ SUMMARY ◆

## Drinking Water Regulations for COMMUNITY Water Supplies

### I. DEFINITION OF PUBLIC WATER SUPPLY

"Public water supply system" means a system for the provision of water for human consumption from any community well, water hauler for cisterns, water bottling plants, water dispenser, or other water supply that has at least 15 service connections or that regularly serves at least 25 persons daily for a period at least 60 days in a calendar year.

There are three types of public water supplies.

- A. **"Community water system"** means a public water supply system which serves at least 15 service connections used by year-round residents or that regularly serves at least 25 year-round residents.
- B. **"Transient non-community water system"** means a public water supply system that is not a community water system and that does not regularly serve at least 25 of the same persons for at least 6 months a year. This system primarily serves a transient population (cafes, bars, campgrounds, motels, etc.).
- C. **"Non-transient non-community water system"** means a public water supply system that is not a community water system and that regularly serves at least 25 of the same persons over six months per year. Examples are separate systems serving workers and schools.

Your particular water system has been classified as a **community** public water system. As owner, manager or operator of a community system, you have important responsibilities outlined in Montana law. You should become familiar with the five requirements listed in the side table.

Contaminants monitored Sampling frequency Public notification Operator certification Water system improvements
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### II. NATURE OF CONTAMINANTS AND MAXIMUM CONTAMINANT LEVELS

Because community water systems serve a year-round population, regular monitoring must be conducted for contaminants that have an immediate or cumulative adverse effect on human health. With this in mind, Montana regulations require all community public water supplies to monitor for microbiological, chemical and radiological quality.

### A. MICROBIOLOGICAL QUALITY - TOTAL COLIFORM RULE

Coliform bacteria, while not disease producers themselves, are often associated with pathogenic (disease-causing) organisms and are a good index of the degree of bacteriological safety of a water. Community water supplies must sample for coliform bacteria on a monthly basis, in accordance with this Total Coliform Rule summary.

This regulation impacts all public water supplies in Montana. All Montana public water supplies began meeting the monitoring and reporting requirements of this rule in January, 1991. The federal rule became final in June, 1989. The applicable federal reference is 40 CFR Parts 141 and 142.

*It is the responsibility of the water system owner(s) to select a lab certified to perform microbiological analysis and have them send you sterile containers on a monthly basis. If the containers are not received, please notify your lab. The laboratory will send a copy of the bacteriological analysis report to the Public Water Supply Section. The water supplier is responsible for the cost of all analyses. Please choose a Laboratory certified to perform microbiological or chemical water analysis from the Certified Montana Laboratories chart included on the last page of this summary.*

#### 1. ROUTINE MONITORING

Monitoring requirements are based on population served. (See table below). All public water supplies must monitor once per month at a minimum. Monthly monitoring has changed for systems serving over 4,900 population. Refer to the side table and notify the certified lab performing your analyses if your monitoring frequency has changed.

If your system serves over 4,900 population and uses only ground water (except ground water under the direct influence of surface water), routine samples must be collected at regular time intervals throughout the month. If your system serves 4,900 or fewer you may collect all of the samples on the same day, but they must be at different sample sites.

## SEQUENCE OF ROUTINE SAMPLING

- All required routine samples shall be collected only from the sites identified in the sample site plan. (See Section II. A. 5.)
- Required routine samples shall not be collected from the same routine sample site more than once during the month or year until all remaining designated routine sample sites have already been sampled.
- The routine sample site identification number and street address of the routine sample site shall be included on the bacteriological examination report form.

## 2. REPEAT SAMPLES

If a routine sample is total coliform-positive, then you must submit a set of repeat samples within 24 hours of being notified of the positive result (see side table). The laboratories should automatically send out repeat sample bottles for water suppliers to have available if they are needed. *It is the responsibility of the owner/operator to have enough bottles on hand to send in repeat samples within 24 hours.* At least one repeat sample must be from the same tap as the original sample; other repeat samples must be collected from within five service connections both upstream and downstream of the original sample. Systems required to collect 4 repeat samples may collect the 4th sample from anywhere in the distribution system. Difficulties with these repeat sampling locations must be worked-out with the State on a case-by-case basis. The State may waive the 24 hour-requirement on a case-by-case basis.

Monitoring and Repeat Sample Frequency After a Total Coliform - Positive Routine Sample		
Number of Routine Samples/Month	Number of Repeat Samples	Number Routine Samples Next Month
1/month or fewer	4	5/month
2/month	3	5/month
3/month	3	5/month
4/month	3	5/month
5/month or greater	3	Table VII

\* Vended water treatment units are required to sample monthly from each unit.

All repeat samples must be collected on the same day, except the State may allow a system with a single service connection to collect the required set of repeat samples over a four-day period. Unless otherwise authorized by the State, systems with a single service connection should collect all repeat samples the same day, even if this means they are all collected from the same tap in rapid succession.

When coliform bacteria are also found in a repeat sample, a possible source of contamination exists and steps must be taken to correct the problem. System disinfection may be necessary and additional samples are required to determine if the contamination has been eliminated. For advice concerning possible sources of contamination or disinfection procedures, please contact your county sanitarian or the Public Water Supply Section.

If total coliforms are detected in any repeat sample, the system must collect another set of repeat samples, as before, unless the MCL has been violated and the system has notified the State (in which case the State may reduce or eliminate the repeat sampling requirement for the remainder of the month).

## TIMING OF REPEAT SAMPLING

For systems with more than one service connection, all repeat samples shall be collected within 24 hours of notification, either in writing or by telephone, of a coliform-positive sample. This process shall be repeated until a complete set of 4 repeat samples is coliform-negative or until the public water system exceeds the maximum contaminant level (MCL) for total coliform bacteria and notifies the Department. *Systems with a single service connection may collect the required repeat samples over a four-day period.*

## LOCATION OF REPEAT SAMPLES

For community systems, repeat samples shall be collected at the following locations:

TOTAL COLIFORM SAMPLING REQUIREMENTS ACCORDING TO POPULATION SERVED			
Population Served	Minimum Number of Routine Samples Per Month	Population Served	Minimum Number of Routine Samples Per Month
25 to 1,000	1	17,201 to 21,500	20
1,001 to 2,500	2	21,501 to 25,000	25
2,501 to 3,300	3	25,001 to 33,000	30
3,301 to 4,100	4	33,001 to 41,000	40
4,101 to 4,900	5	41,001 to 50,000	50
4,901 to 5,800	6	50,001 to 59,000	60
5,801 to 6,700	7	59,001 to 70,000	70
6,701 to 7,600	8	70,001 to 83,000	80
7,601 to 8,500	9	83,001 to 96,000	90
8,501 to 12,900	10	96,001 to 130,000	100
12,901 to 17,200	15		

- At the location of the coliform-positive routine sample.
- Within five service connections upstream from the coliform-positive routine sample.
- Within five service connections downstream from the coliform-positive routine sample.
- If a fourth repeat sample is required, it may be collected anywhere in the distribution system, but preferably at the storage tank, reservoir or water source (downstream from any treatment) serving the coliform-positive routine sample location.
- For non-community systems, including non-transient non-community systems, at least one repeat sample shall be collected from the location of the coliform-positive sample. Where other sample locations are available, repeat samples shall be collected from representative sites at opposite ends of the facility served by the system.
- The routine sample site identification number of the coliform-positive sample shall be included on the bacteriological examination report form of each repeat sample, along with one of the location identification codes: (See above table).

ROUTINE SAMPLE SITE IDENTIFICATION	
<b>U</b> Upstream	<b>T</b> Tank or reservoir serving sample site
<b>D</b> Downstream	<b>S</b> Source of water for routine sample site
<b>R</b> Routine sample site	<b>O</b> Other location

### FAILURE TO COLLECT REPEATS

Failure to submit the required number of repeat samples for the Public Water Supply (PWS) is a violation of the coliform MCL and subjects the system to the required public notification. Details of public notification requirements and federally mandated language which must be issued is outlined in the enclosed, "EPA Public Notification For Public Water Systems."

### ROUTINE SAMPLES REQUIRED FOLLOWING TOTAL COLIFORM DETECTION

If a system which collects fewer than five routine samples/month detects total coliforms in any routine or repeat sample, it must collect a set of five routine samples the next month the system provides water to the public. These samples are required *in addition to* any repeat samples being collected for a previous total coliform-positive sample.

### LABORATORY ANALYSIS

Total coliform analyses are to be conducted using the 10-tube MTF Technique, the MF Technique, the P-A Coliform Test or the Minimal Media ONPG-MUG Test (Autoanalysis Colilert System). The system may also use the 5-tube MTF Technique (20-ml sample portions) or a single culture bottle containing the MTF medium, as long as a 100-ml water sample is used in the analysis.

If any routine or repeat sample is total coliform-positive, that total coliform-positive culture must be analyzed to determine if fecal coliforms are present. E. coli may be tested for instead of fecal coliforms. If fecal coliforms or E. coli are detected, the system must notify the State before the end of the same business day, or, if detected after the close of business for the State, by the end of the next business day.

On a case-by-case basis, a water system can forgo fecal coliform or E. coli testing on total coliform-positive samples, if the system treats every total coliform-positive sample as if it contained fecal coliforms, i.e., the system complies with all sections of the rule which apply when a sample is fecal coliform-positive.

If the laboratory finds that heterotrophic bacteria interfered with any coliform analysis, the system must collect another sample within 24 hours of being notified of the result. The sample must be collected from the same location as the original sample and be analyzed for total coliforms.

### 3. MAXIMUM CONTAMINANT LEVELS (MCLs):

- MCL for systems analyzing at least 40 samples/month: *no more than 5.0 percent of the samples collected during a month may be total coliform-positive.*
- MCL for systems analyzing less than 40 samples/month: *no more than 1 sample/month may be total coliform-positive.*
- Routine and repeat samples are included in this calculation. Special samples, such as those following pipe replacement or repair, will not be used for MCL determinations.
- MCL - failure to submit repeats for a coliform positive routine sample creates a non-acute MCL violation for total coliforms.
- If any repeat sample is fecal coliform- or E. coli-positive, or if a fecal coliform- or E. coli-positive original sample is followed by a total coliform-positive repeat sample, the system is in violation of the MCL for total coliforms. This is an acute violation of the MCL for total coliforms.

### 4. BACTERIOLOGICAL PUBLIC NOTICE REQUIREMENTS

Violations of the MCL when total coliforms, fecal coliforms or E. coli are present requires that specific wording be used for public notice. Public notice is also mandated if a system fails to monitor as required. The federal rules also detail how, when, and at what frequency notice must be provided. Different violations have different requirements, based on their potential impact on public health. Contact the State Department of Environmental Quality for assistance when public notice is required. Public Notification requirements are outlined in the enclosed, "EPA Public Notification for Public Water Systems." See Section III. B., beginning on page 21.

## 5. TOTAL COLIFORM SAMPLE SITE PLAN GUIDELINES

A coliform sample site plan must be prepared by the owner and sampled in accordance with the guidelines. To ensure samples are representative, routine sample sites shall be evenly spaced throughout the area of the entire distribution system. Routine sample sites shall be selected to sample water in the distribution system from each water source, storage tank, reservoir and pressure zone. Sample sites must be rotated each time a routine sample is collected.

Plans are subject to State review and revision. **Sample site plans shall be submitted to the department within 30 days of system start-up date.** The sample site plan will be placed in the department's files and reviewed during sanitary surveys and field inspections. The plan is also used by the department to help a supplier research a contamination problem.

At a minimum, the sample site plan should include:

- A map of the water distribution system showing the location of each routine sample site, water source, treatment facility, storage tank and reservoir and the boundaries of each pressure zone. Each routine sample site shall be assigned a unique and permanent identification number, which shall be shown on the map.
- A description of the monthly sampling rotation cycle. The required number of monthly routine samples may be less than is necessary to cover all pressure zones and areas served by each source and reservoir. In such cases, sample locations should be rotated on a monthly basis. Systems are strongly encouraged to monitor each pressure zone at least once every three months.
- A location description, including the owner's name, business name and street address where available, for each routine sample site.

### The Minimum Number of Routine Sample Sites



MINIMUM ROUTINE SAMPLE SITES	
SERVICE CONNECTIONS	SAMPLE SITES
1	1
2 to 10	2
11 to 100	3
101 to 500	4
> 500	5

## RECOMMENDATIONS FOR SELECTION OF SAMPLE SITES

- Plumbing should be inspected to ensure there are no cross-connections with non-potable water sources.
- The sampling tap should be free of any aerators, strainers, hoses or water treatment devices.
- Leaking taps that allow water to flow over the outside of the tap should be avoided.
- Outside taps, swivel taps and combined hot and cold water faucets should be avoided.
- Routine sample sites shall be accessible daily and throughout the entire year.
- No routine sample site may be the last service connection from any dead end of the water distribution system.
- Repeat sample sites shall be available within five service connections both upstream and downstream of each routine sample site.
- Small systems may, if necessary, collect repeat samples at one or more of the other routine sample sites if they are located within five service connections of the original coliform-positive routine sample site.

## B. EPA LEAD AND COPPER SUMMARY

**"Lead may leach into the water from some kinds of home plumbing."**

The Lead and Copper Rule was published in the *Federal Register* on June 7, 1991. It became effective on December 7, 1992. This rule requires treatment when lead and/or copper in drinking water exceeds certain levels.

Lead enters drinking water mainly from the corrosion of lead-containing household plumbing. Since lead and copper contamination generally occurs after water has left the public water system, the best way for the water system operator to find out if customer water is contaminated is to test water that has come from a household faucet. This type of contamination can be prevented by controlling the corrosiveness of the water supply. If corrosion control is not sufficient, lead-containing materials may have to be replaced.

	MCLG (mg/L)	Action Level (mg/L)
Lead	0	0.015
Copper	1.3	1.3

### Action Levels

**Maximum Contaminant Level Goals (MCLG):** Water systems should try to supply water which is free of lead and has no more than 1.3 milligrams of copper per liter (mg/L). This is a *non-enforceable* health goal.

**Action Levels:** When the concentration of lead or copper reaches the action level in ten percent of the total number of required samples, the water system is required to carry out the water treatment requirements of the rule. These *enforceable* treatment requirements are described below.

### Monitoring Requirements

#### Lead/copper monitoring at high-risk homes.

Water systems must complete a materials evaluation of their distribution system and/or review other information to target homes that are at high risk of lead/copper (Pb/Cu) contamination. Monitoring is to be conducted *at the tap* in these homes, with the number of tap-sampling sites based on the population served. One sample is required at each site.

Monitoring Requirements		
Number of Initial Sampling Sites		
System Size	# at home taps for Pb/Cu	# within dist. for WQPs
>100,000	100	25
10,001-100,000	60	10
3,3001-10,000	40	3
501-3,300	20	2
101-500	10	1
≤100	5	1

**Additional monitoring for other water quality parameters (WQPs)** affecting corrosion is required to optimize treatment and determine compliance with State lead/copper standards. Two types of systems must perform this monitoring under the following conditions:

Large systems serving more than 50,000 persons, regardless of the lead/copper levels in tap samples.

Smaller systems serving less than 50,000 person, if either action level is exceeded in tap samples.

**Two types of sampling sites are specified for this purpose:**

*Within* the distribution system, with the number of sites based on population served (sites may be same as for coliform sampling). Two samples are required from each site.

One sample at each *entry* point to the distribution system.

#### Monitoring Frequencies

Initially, systems must collect home *tap* samples for lead and copper analysis and samples for other water quality parameters (WQPs) every six months. In systems that are required to install corrosion control treatment, follow-up samples for other WQPs must be taken from *within* the distribution system every six months, and from *entry* points to the distribution system every two weeks. Both the number of sampling sites and the frequency may be reduced if the action level is met or the system maintains optimal treatment.

Monitoring Requirements			
◆ Frequency of Sampling			
	Pb/Cu	WQPs	
Monitoring Period	Home taps	within dist.	at entry to dist.
Initial	6 mo.	6 mo.	6 mo.
After corrosion treatment	6 mo.	6 mo.	2 wk.
Reduced			
Conditional	1 yr.	6 mo.	2 wk.
Final	3 yr.	3 yr.	2 wk.

## Water Treatment Requirements

Analytical Requirements
Tap Samples
Lead
Copper
WQPs
Ph
Alkalinity
Calcium
Conductivity
Orthophosphate
Silica
Temperature

**Four types of action** are required to remedy high lead/copper levels. Once a system finds that more than 10 percent of all tap monitoring results exceed the action levels, the system must begin to carry out the first three actions.

1. **Corrosion control treatment.** Systems are required to first monitor, and depending on its size, conduct corrosion control studies and recommend a corrosion control treatment to the State. Upon the approval of the State, treatment is to be installed and demonstrated to be effective according to criteria set by the State. Treatment options are: Ph and alkalinity adjustment, calcium adjustment, and silica or phosphate-based corrosion inhibition.
2. **Source Water Treatment.** Systems must first monitor their source water for the presence of lead/copper, and, if necessary, recommend a treatment to the State. Treatment options are: ion exchange, lime softening, reverse osmosis, and coagulation/filtration. Once the State approves a treatment, systems will have 2 years to install it and 1 more year to conduct follow-up monitoring. If treatment is not required, or if the treated water does not exceed the maximum lead/copper levels permitted by the State, source water monitoring will be synchronized with the system's other monitoring schedules.
3. **Public Education.** Public education materials developed by EPA will inform customers about the health effects of lead, and explain what they can do at home to reduce their exposure. The system must begin delivering the materials within 60 days of the lead action level exceedance. The materials include public service announcements to be submitted periodically to television and radio stations, and other pamphlets to be delivered directly to customers, newspaper, hospitals, etc.

**IF** a system continues to exceed the lead action level after installing optimal corrosion control and source water treatment, the fourth action must be taken:

4. **Lead Service Line Replacement.** Lead service lines that contribute more than 0.015 mg/L to tap water lead levels must be replaced. A system must replace seven percent of its lead lines each year, and must replace all lines within 15 years.

Compliance Deadlines			
NOTE: assume action levels exceeded in initial monitoring			
Action	System Size		
	Large >50K	Medium 3,000-50K	Small ≤3,000
Begin monitoring	Jan92	Jul92	Jul93
Complete treatment study (If required by State)	Jul94	Jul95	Jul96
Recommend treatment to State study not required	N/A	Jan93	Jan94
study required	Jul94	Jul95	Jul95
Complete treatment installation study not required	N/A	Jul96	Jan98
study required	Jan97	Jan98	Jan99
Complete follow-up monitoring study not required	N/A	Jul97	Jan99
study required	Jan98	Jan99	Jan2000

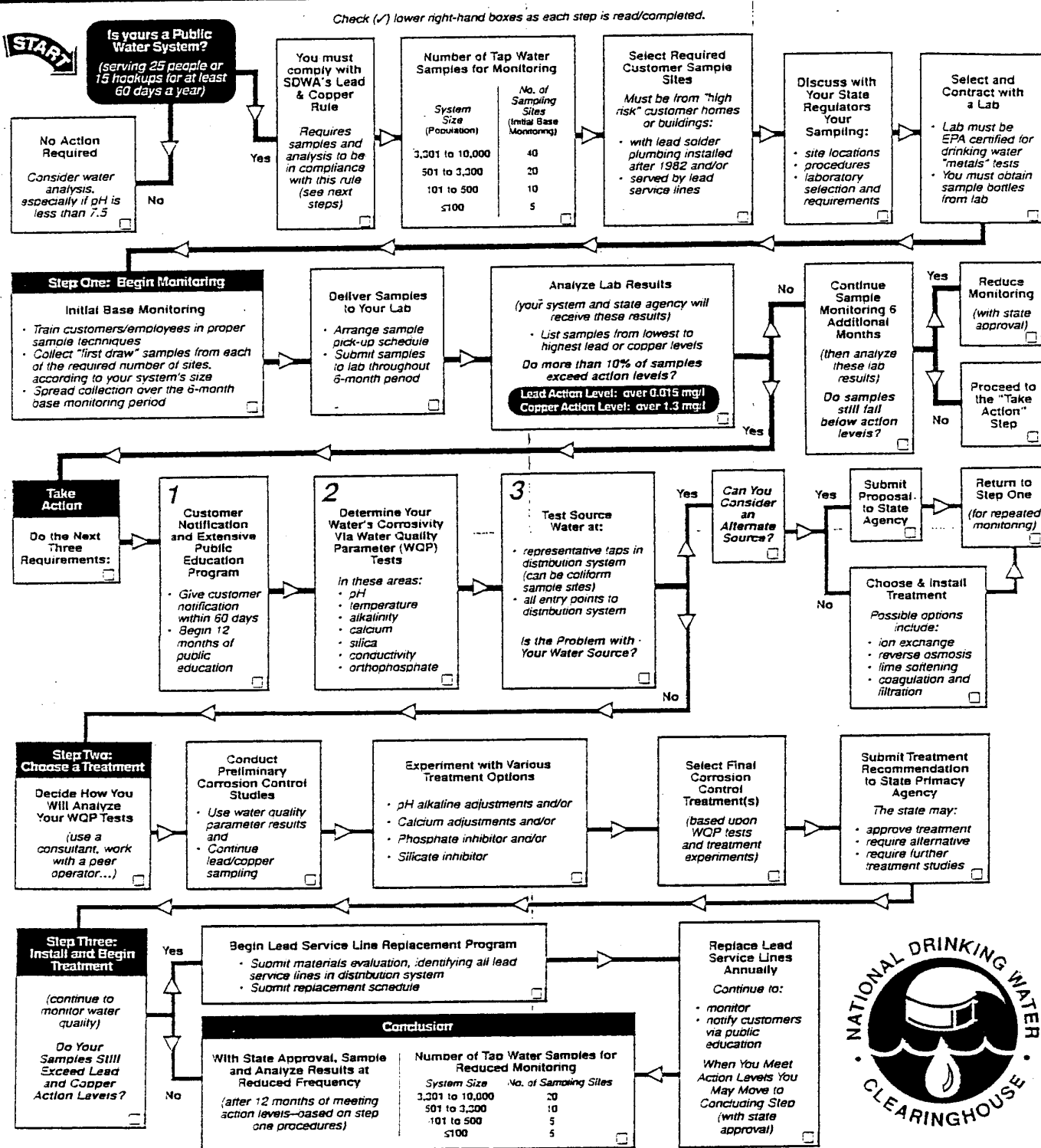
## For More Information

Call the Safe Drinking Water Hotline at: 1-800-426-4791.



# Lead and Copper Rule

## Basic Decision Process for Small Water Utilities



This diagram has been designed and produced by NDWC and supplements a series of On Tap articles. Call 1-800-624-8301 for more information.

## C. EPA PHASE II RULE SUMMARY

**"Phase II roughly doubled the present number of drinking water standards."**

The Phase II Rule was published in the *Federal Register* on January 30, 1992, and July 1, 1991. It became effective in 1992 with monitoring requirements to begin January 1, 1993. This rule sets drinking water standards for 38 inorganic and organic chemicals. All community and non-transient non-community water systems are required to monitor for and, if necessary, treat their supply to remove these chemicals. Transient water systems are required to comply with the nitrate and nitrite regulations in Phase II.

Phase II roughly doubled the present number of drinking water standards. While many of these chemicals may occur in drinking water in drinking water due to human activity others are naturally occurring. Some chemicals are only rarely found in water supplies but are very widely used and are being regulated because of the likelihood that they may contaminate supplies.

### Drinking Water Standards

**Maximum Contaminant Levels (MCLs):** Public Water Systems are required to make sure that the water they supply meets the MCL for each Phase II chemical. These are *enforceable* standards.

**Treatment Techniques:** When there are no analytical methods available for monitoring a contaminant's presence in water, systems are required to use a treatment technique for removing this chemical. Two Phase II chemicals are controlled in this way, simply by limiting their use in other treatment processes.

**Maximum Contaminant Level Goals (MCLGs):** For each chemical, EPA has set a *non-enforceable* health goal which water systems should try to achieve. Water containing a chemical in an amount equal to or below its MCLG is not expected to cause any health problems, even over a lifetime of drinking this water.

### Monitoring Requirements

A major feature introduced in Phase II is its plan for synchronizing compliance monitoring across several existing and upcoming rules. Under this **Standardized Monitoring Framework**, the various monitoring frequencies for most source-related contaminants will be coordinated within **compliance periods** of three years each. Some monitoring and related system activities, such as vulnerability assessments, will occur at intervals which may span across up to three of these three-year periods, forming a nine-year **compliance cycle**. The first compliance cycle and the initial compliance period both begin on January 1, 1993.

Other features of Phase II monitoring requirements include:

**Sampling location** - Ground water systems must sample at entry points to the distribution system that are representative of each well after any application of treatment. Surface water systems must sample at points within the distribution system that are representative of each source or at entry points to the distribution system after any application of treatment. Samples must be analyzed by a state-certified lab.

**Initial sampling frequency** - All systems must sample at a base (or minimum) frequency that is specific for a contaminant or contaminant group. The state may grant monitoring waivers (see statewide waiver section) and may allow a system to substitute suitable previous monitoring data for this initial monitoring. In the initial compliance period, the actual year in which a system samples will be determined by the state.

**Repeat sampling frequency** - In general, if a system does not detect contaminants in initial samples, then repeat sampling frequencies will be lower than initial frequencies. Repeat monitoring requirements are generally the same for all systems regardless of system size or water source.

**Trigger to increase monitoring** - If contaminants are detected in any sample, the system must begin quarterly sampling until the state determines that subsequent results are "reliably and consistently" below the MCL. At least two to four samples must be taken before this determination may be made. The trigger level for various contaminants or contaminant groups is the MCL, 50 percent of the MCL, or at the analytical method detection limit.

**Unregulated contaminant monitoring** - Phase II also contains one-time monitoring requirements for 30 other contaminants during the initial period which begins on January 1, 1993. Systems must take one year of quarterly samples for organic contaminants and one sample for inorganic contaminants. No MCLs have been set for these contaminants and no further monitoring is required if these chemicals are detected. Systems only need to report the results of this monitoring to the state. (See statewide waiver section for more detail).

## 1. NITRATE MONITORING AND MAXIMUM CONTAMINANT LEVELS (MCLs)

This section summarizes revised monitoring requirements for nitrate as promulgated under the U.S. Environmental Protection Agency's (EPA) Phase II Rule. The revised monitoring requirements for nitrate take effect January 1993.

### Systems Affected

All community water systems (CWS), transient and nontransient, noncommunity water systems (TWS and NTWS, respectively) must comply with the monitoring requirements for nitrate.

### **Sampling Points**

Sampling must be conducted at each entry point to the distribution system. Sampling points must be representative of the well or source water after treatment.

### **Initial Base Sampling**

All water systems began complying with the revised sampling requirements for nitrate on January 1, 1993. The frequency of initial sampling is as follows:

**CWS and NTWS:** *Groundwater systems* must sample annually while *surface water systems* must sample quarterly.

**TWS:** All systems, regardless of the water source, must sample annually.

### **Grandfathering**

Not allowed.

### **MCL's and Trigger for Increased Sampling**

Any sample greater than or equal to ( $\geq$ ) 50 percent of the MCL triggers the need for increased sampling. Analytical results less than ( $<$ ) 50 percent of the MCL for a minimum of one round of sampling may result in decreased sampling. **The trigger is not applicable to transient, noncommunity water systems.** See side table for MCL and trigger level.)

Regulated Contaminant
<b>MCL</b> 10 mg/L (as Nitrogen)
<b>Trigger</b> 5 mg/L (as Nitrogen)

### **Repeat Base Sampling ( $< 50\%$ MCL)**

**CWS and NTWS:** *Groundwater systems* must continue sampling on an annual basis as during the initial sampling phase. States may reduce the sampling frequency to annual for surface water systems provided the analytical results from four consecutive quarters are less than ( $<$ ) 50 percent of the MCL (i.e., 5 mg/L). For systems sampling annually, repeat samples must be taken during the quarter(s) which previously yielded the highest analytical results.

**TWS:** Same as initial sampling requirements (i.e. annual).

### **Increase Sampling ( $\geq 50\%$ MCL or $\geq$ MCL)**

**CWS and NTWS:** Systems collecting any samples(s) greater than or equal to ( $\geq$ ) 50 percent of the MCL must sample on a quarterly basis. States have the discretion to decrease the sampling frequency to annual for *groundwater systems* provided the results of four consecutive quarterly samples are "reliably and consistently" below the MCL. States may reduce the sampling frequency to annual for *surface water systems* provided the analytical results from four consecutive quarters are all less than ( $<$ ) 50 percent of the MCL.

**TWS:** Same as initial sampling requirement (i.e., annual)

### **Confirmation Samples**

Systems must take a confirmation sample within 24 hours after the results of the initial sample are found to be greater than or equal to ( $\geq$ ) the MCL. Systems unable to meet the 24-hour confirmation sampling requirement must issue a public notice to consumers of the system and must then analyze a confirmation sample within two weeks of receiving the results of the initial sample.

### **Compliance Determination**

If any sample exceeds the MCL for nitrate, systems must take a confirmation sample. The compliance determination is based on the average of the results of the initial and confirmation samples.

### **Public Notice**

\* See enclosed summary of "EPA Public Notification for Public Water Systems," for more detail.

### **Waivers**

Not allowed

## 2. NITRITE MONITORING AND MAXIMUM CONTAMINANT LEVELS (MCLs)

This section summarizes the monitoring requirements for nitrite as promulgated under the U.S. Environmental Protection Agency's (EPA) Phase II Rule. Monitoring for nitrite began in January 1993.

### Systems Affected

All community water systems (CWS), transient and nontransient, noncommunity water systems (TWS and NTWS, respectively) must comply with the monitoring requirements for nitrite.

### Sampling Points

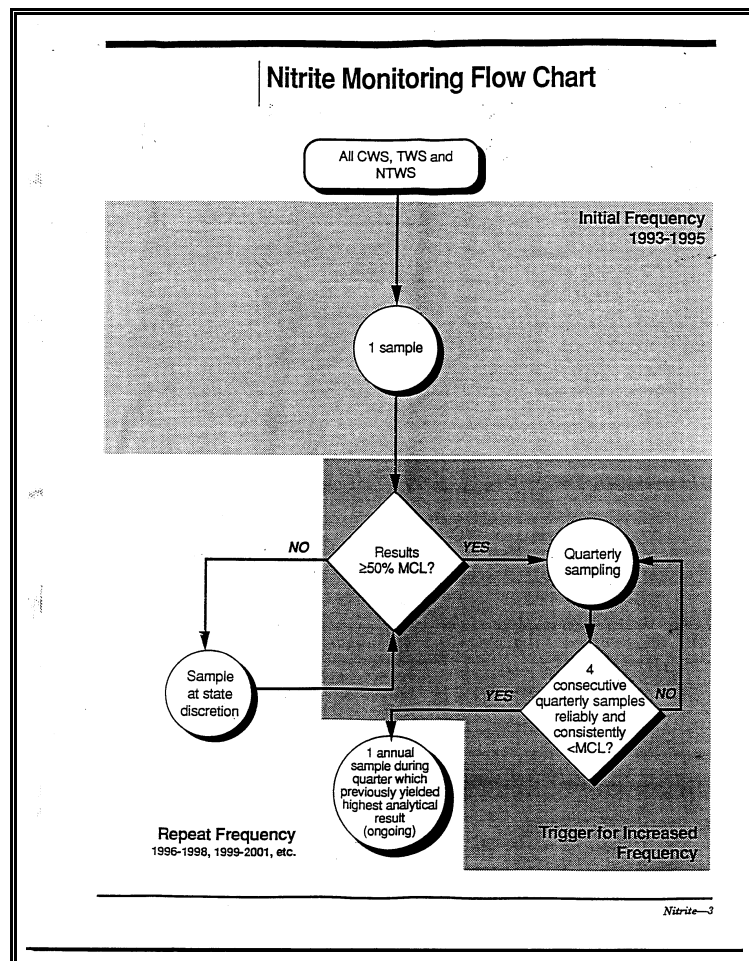
Sampling must be conducted at each entry point to the distribution system. Sampling points must be representative of the well or source water *after treatment*.

### Initial Base Sampling

All systems began complying with revised sampling requirements for nitrite between 1993 and 1995, each system must take one sample, unless a combined nitrate plus nitrite test is done and the result is less than ( $<$ ) 0.5 mg/l.

### Grandfathering

Not allowed



### MCL's and Trigger for Increased Sampling

Regulated Contaminant
<b>MCL</b> 1 mg/L (as Nitrogen)
<b>Trigger</b> 0.5 mg/L (as Nitrogen)

The trigger for increased / decreased sampling for nitrite is 50 percent of the MCL (i.e., 0.5 mg/L). See side table for MCL and trigger level.

### Repeat Base Sampling ( $< 50\%$ MCL)

If the results of initial sampling are less than ( $<$ ) 50 percent of the MCL, repeat sampling requirements (if any) will be at state discretion.

### Increased Sampling ( $\geq 50\%$ MCL or $\geq$ MCL)

Systems collecting any sample(s) greater than or equal to ( $\geq$ ) 50 percent of the MCL must sample quarterly for at least one year.

States may decrease the sampling frequency to annual provided the results of four consecutive quarterly samples are "reliably and consistently" below the MCL.

Systems sampling annually must take subsequent samples during the quarter which previously yielded the highest analytical result.

### Confirmation Samples

Systems must take a confirmation sample within 24 hours after the results of the initial sample are found to be greater than or equal to ( $\geq$ ) the MCL. Systems unable to meet the 24-hour confirmation sampling requirement must issue a public notice to consumers of the system and must then analyze a confirmation sample within two weeks of receiving the results of the initial sample.

## **Compliance Determination**

If any sample exceeds the MCL for nitrite, systems must take a confirmation sample. The compliance determination is based on the average of the results of the initial and confirmation samples.

## **Public Notice**

\* See enclosed summary of "EPA Public Notification for Public Water Systems," for more detail.

## **Waivers**

Not allowed

## **D. EPA PHASE V RULE SUMMARY**

The same Drinking Water Act (SDWA) amendments passed by Congress in 1986 required EPA to set drinking water standards for 83 contaminants listed in the Act and an additional 25 contaminants every three years. To date, the Agency has promulgated National Primary Drinking Water Standards for eight volatile organic chemicals (VOCs), fluoride, coliform and other microbiological contaminants, 38 synthetic organic chemicals (SOCs) and inorganic chemicals (IOCs) and lead and copper. Regulations for Phase V, radionuclides (proposed July 1991) and a revised standard for arsenic count toward completion of the required 83.

The Phase V Rule sets drinking water standards for 23 contaminants that may be found in drinking water. The regulation includes Maximum Contaminant Levels (MCLs), Maximum Contaminant Level Goals (MCLGs), requirements for monitoring, reporting, public notification and Best Available Technologies (BATs) for water treatment. In general, a low occurrence of these contaminants is expected in drinking water and it is estimated that 256 systems will exceed on MCL, with most systems exceeding the MCL for antimony.

### ***DRINKING WATER STANDARDS***

**Maximum Contaminant Levels (MCLs):** Public Water Systems are required to make sure that the water they supply does not exceed the MCL for each Phase II chemical. These are enforceable standards that are considered feasible and safe.

**Maximum Contaminant Level Goals (MCLGs):** For each chemical, EPA has set a non-enforceable health goal which water system should try to achieve. Water containing a chemical in an amount equal to or below its MCLG is not expected to cause any health problems, even over a lifetime of drinking this water.

### **APPLICABILITY OF MCLs**

MCLs established under the Safe Drinking Water Act are Federally enforceable standards for finished water provided by Public Water Supply Systems. In addition, these standards are often used as reference points for the protection and remediation of water resources under several EPA programs as well as programs implemented by other federal agencies and states.

### **MONITORING REQUIREMENTS**

Phase V makes use of the standard monitoring framework which will reduce the complexity of the monitoring requirements, coordinate the requirements among various regulations and synchronize the monitoring schedules by establishing "three year" monitoring periods for drinking water contaminants.

A previous drinking water regulation (Phase II, December 1990) required that certain public water supplies monitor for specified unregulated contaminants by December 1995, including a number of Phase V contaminants. The final Phase V rule takes advantage of this requirement and uses the 1993-1995 initial monitoring date for all contaminants for water systems with 150 or more service connections. Smaller systems are required to monitor Phase V chemicals during the 1996-1998 monitoring period. Monitoring requirements are summarized in the enclosed, "Summary of Public Water Supply Monitoring Requirements," charts.

### **RELATED FEDERAL WATER QUALITY PROGRAMS**

Many of the contaminants regulated under the SDWA are subject to regulation under other Federal environmental statutes. For example, MCLs established under the SDWA are often used as human health criteria established under the Clean Water Act. Pesticides (including 9 Phase V contaminants) are regulated under the Federal Insecticide, Fungicide and Rodenticide Act. In addition, voluntary programs have been established by the U.S. Department of Agriculture and other Federal Agencies (in cooperation with EPA) to reduce risks of contamination of surface water and ground water from pesticides and other substances.

## **PHASE II & PHASE V MAXIMUM CONTAMINANT LEVELS (MCL's)**

## 1. Inorganic Contaminants

Sixteen chemical contaminants must be analyzed in accordance with the monitoring requirements of the Phase II Rules and Phase V Rules. In addition, fluoride and arsenic must be analyzed for every three years and lead and copper monitored in accordance with the enclosed Lead & Copper Rule. These inorganic contaminants can have a cumulative impact on human health if consumed in sufficient quantities over a long period of time. It is therefore important that concentrations be low enough so someone who drinks the water on a daily basis will not develop health problems. *It is the responsibility of the system owner/operator to sample for inorganic chemicals.* A list of certified laboratories is enclosed on the last page of this summary.

Maximum Contaminant Levels (MCLs)

INORGANIC CHEMICAL MAXIMUM CONTAMINANT LEVELS (MCLs)	
Contaminant	MCL in mg/L
(1) Arsenic	0.05
(2) Fluoride	4.0
(3) Asbestos	7 mill fibers/liter (longer than 10 µm)
(4) Barium	2
(5) Cadmium	0.005
(6) Chromium	0.1
(7) Mercury	0.002
(8) Nitrate	10 (as Nitrogen)
(9) Nitrite	1 (as Nitrogen)
(10) Total Nitrate + Nitrite	10 (as Nitrogen)
(11) Selenium	0.05
(12) Antimony	0.006
(13) Beryllium	0.004
(14) Cyanide (as free Cyanide)	0.2
(15) Nickel	0.1
(16) Thallium	0.002

VOLATILE ORGANIC CHEMICAL MAXIMUM CONTAMINANT LEVELS (MCLs)		
Chemical Abstract Services No.	Contaminant	MCL in mg/L
(1) 75-01-4	Vinyl Chloride	0.002
(2) 71-43-2	Benzene	0.005
(3) 56-23-5	Carbon tetrachloride	0.005
(4) 107-06-2	1,2-Dichloroethane	0.005
(5) 79-01-6	Trichloroethylene	0.005
(6) 106-46-7	para-Dichlorobenzene	0.075
(7) 75-35-4	1,1-Dichloroethylene	0.007
(8) 71-55-6	1,1,1-Trichloroethane	0.2
(9) 156-59-2	cis-1,2-Dichloroethylene	0.07
(10) 78-87-5	1,2-Dichloropropane	0.005
(11) 100-41-4	Ethylbenzene	0.7
(12) 108-90-7	Monochlorobenzene	0.1
(13) 95-50-1	o-Dichlorobenzene	0.6
(14) 100-42-5	Styrene	0.1
(15) 127-18-4	Tetrachloroethylene	0.005
(16) 108-88-3	Toluene	1
(17) 156-60-5	Trans-1,2-Dichloroethylene	0.1
(18) 1330-20-7	Xylenes (total)	10
(19) 75-09-2	Dichloromethane	0.005
(20) 120-82-1	1,2,4-Trichlorobenzene	0.07
(21) 79-00-5	1,1,2-Trichloroethane	0.005

## 2. Volatile Organic Chemicals (VOC's Contaminants)

Volatile Organic Chemicals are commonly found in materials such as paints, solvents, and petroleum products. The presence of VOC's in drinking water is a health concern primarily due to their potential ability to cause cancer when consumed over long periods of time. Each source of water in a system must be sampled separately for VOC's.


After samples from each source have been collected, the system may ask the lab to combine up to 5 separate groundwater source samples into one analysis for systems < 3300 population. This will save the cost of separate analyses. However, if VOC's are detected, separate source samples must be analyzed to determine which are contaminated. Combining source samples is recommended *unless* VOC contamination is suspected in one or more of the sources. Initially **Surface water sources** must be sampled separately for all 4 quarters of a calendar year. Future sampling is based on the first sampling results, the source vulnerability to contamination, and the population served by the system.

The water supplier must contact a certified laboratory to request sample bottles. Procedures for collecting these samples are described in the enclosed, "How to Collect a Sample" sheet

Maximum Contaminants Levels (MCLs)

### 3. Herbicides & Pesticides (SOC's)

Thirty-three pesticides and synthetic organic chemicals (SOC's) must be analyzed in accordance with the monitoring requirements in the Phase II Rules and Phase V Rules. *It is the responsibility of the system owner/operator to sample for these organic contaminants.* A list of certified labs is enclosed on the last past of this summary.

Maximum Contaminants Levels (MCLs) 

SYNTHETIC ORGANIC CHEMICALS MAXIMUM CONTAMINANT LEVELS (MCLs)		
Chemical Abstract Services No.	Contaminant	MCL in mg/L
(1) 15972-60-8	Alachlor	0.002
(2) 116-06-3	Aldicarb <sup>1</sup>	
(3) 1646-87-3	Aldicarb sulfoxide <sup>1</sup>	
(4) 1646-87-4	Aldicarb sulfone <sup>1</sup>	
(5) 1912-24-9	Atrazine	0.003
(6) 1563-66-2	Carbofuran	0.04
(7) 57-74-9	Chlordane	0.002
(8) 96-12-8	Dibromochloropropane	0.0002
(9) 94-75-7	2,4-D	0.07
(10) 106-93-4	Ethylene dibromide	0.00005
(11) 76-44-8	Heptachlor	0.0004
(12) 1024-57-3	Heptachlor epoxide	0.0002
(13) 58-89-9	Lindane	0.0002
(14) 72-43-5	Methoxychlor	0.04
(15) 1336-36-3	Polychlorinated biphenyls	0.0005
(16) 87-86-5	Pentachlorophenol	0.001
(17) 8001-35-2	Toxaphene	0.003
(18) 93-72-1	2,4,5-TP	0.05
(19) 50-32-8	Benzo[a]pyrene	0.0002
(20) 75-99-0	Dalapon	0.2
(21) 103-23-1	Di(2-ethylhexyl) adipate	0.4
(22) 117-81-7	Di(2-ethylhexyl) phthalate	0.006
(23) 88-85-7	Dinoseb	0.007
(24) 85-00-7	Diquat	0.02
(25) 145-73-3	Endothall	0.1
(26) 72-20-8	Endrin	0.002
(27) 1071-53-6	Glyphosate	0.7
(28) 118-74-1	Hexachlorobenzene	0.001
(29) 77-47-4	Hexachlorocyclopentadiene	0.05
(30) 23135-22-0	Oxamyl (Vydate)	0.2
(31) 1918-02-1	Picloram	0.5
(32) 122-34-9	Simazine	0.004
(33) 1746-01-6	2,3,7,8-TCDD (Dioxin)	3 x 10 <sup>-8</sup>

<sup>1</sup> The Aldicarbs are currently under "administrative stay" as a result of litigation. They are therefore treated as unregulated contaminants until further notice.



## E. PHASE II AND PHASE V TEST METHODS

COMMUNITY AND NON-TRANSIENT NON-COMMUNITY PUBLIC WATER SUPPLY PHASE II AND PHASE V TEST METHODS MONITORING REQUIREMENTS			
SUGGESTED TEST METHODS	ESTIMATED COSTS	REQUIRED CHEMICALS	
<b>INORGANIC TEST METHODS ARE TOO NUMEROUS TO LIST</b>  (COST DOES NOT INCLUDE ASBESTOS)  UP TO 5 COMPOSITES ALLOWED FOR MERCURY		ALKALINITY *** ANTIMONY * ARSENIC (COMMUNITY ONLY) ASBESTOS (IF A/C PIPE) BARIUM BERYLLIUM * CADMIUM CALCIUM *** CHLORIDE *** CHROMIUM SPECIFIC CONDUCTANCE *** FLUORIDE HARDNESS ***	IRON *** MAGNESIUM *** MANGANESE *** MERCURY NICKEL * NITRATE NITRITE pH *** SELENIUM SODIUM *** SULFATE *** THALLIUM *
<b>EPA METHOD 524.2</b>  UP TO 5 COMPOSITES	\$140 **	VOLATILE ORGANIC CHEMICALS (VOCs) ARE TOO NUMEROUS TO LIST. CERTIFIED LABORATORIES WILL PERFORM THIS TEST FOR ALL OF THE REQUIRED CHEMICALS.	
<b>EPA METHOD 515.1</b>  UP TO 5 COMPOSITES	\$180 **	2,4-D 2,4,5-TP DALAPON DICAMBA	DINOSEB PENTACHLOROPHENOL PICLORAM
<b>EPA METHOD 531.1</b>  UP TO 5 COMPOSITES	\$75 **	3-HYDROXYCARBOFURAN ALDICARB ALDICARB SULFOXIDE ALDICARB SULFONE	CARBARYL CARBOFURAN METHOMYL OXAMYL
<b>EPA METHOD 525.2</b>  NO COMPOSITES	\$240	ALACHOR ALDRIN ATRAZINE BENZO(A)PYRENE BUTACHLOR CHLORDANE DI(2-ETHYLHEXYL)ADIPATE DI(2-ETHYLHEXYL) PHTHALATE DIELDRIN ENDRIN	HEPTACHLOR HEPTACHLOR EPOXIDE HEXACHLOROBENZENE HEXACHLOROCYCLOPENTADIENE LINDANE METHOXYCHLOR METOLACHLOR METRIBUZIN PROPACHLOR SIMAZINE TOXAPHENE
* NOT REQUIRED UNTIL 1996 FOR SYSTEMS WITH FEWER THAN 150 SERVICE CONNECTIONS.  ** MAXIMUM COSTS ARE FOR SYSTEMS SERVING MORE THAN 3300 PERSONS, WHICH ARE <u>NOT ALLOWED TO COMPOSITE</u> SAMPLES. COMPOSITING WILL LOWER THESE COSTS FOR SMALLER SYSTEMS.  *** NOT REQUIRED IF THE ENTRY POINT HAS BEEN TESTED 3 TIMES FOR THESE CHEMICALS.			

## F. STATEWIDE WAIVERS

Public water supplies are not required to sample for endosulfan, diquat, glyphosate, dioxin, ethylene dibromide (EDB), dibromochloropropane (DBCP), asbestos at the source and cyanide. In addition, small public water supplies serving less than or equal to 3300 persons may fulfill the organic chemical baseline monitoring requirements by completing one round of sampling with no detects of organic chemicals.

A statewide monitoring waiver from the **initial quarterly monitoring requirements for the organic chemicals** is available for small public water supplies. Public water supplies serving less than or equal to 3300 persons may complete baseline monitoring requirements with one round of organic chemical sampling, as long as there is no detectable presence of any of the regulated contaminants in the baseline sample or any previous samples. The organic chemicals collectively include the volatile organic chemicals (VOCs), pesticides/herbicides/polychlorinated biphenyls (PCBs) and the synthetic organic chemicals (SOCs).

The organic chemical statewide monitoring waiver applies only to the initial baseline monitoring requirements. Repeat sampling during subsequent compliance periods will be required. However, small public water systems may apply for a "use" or "susceptibility" waiver from organic chemical repeat sampling requirements.

A statewide monitoring waiver may be revoked by the Public Water Supply Program Manager if any information indicates that a public water supply may be vulnerable to potential contamination from the regulated chemicals included in the statewide monitoring program.

### INORGANIC CHEMICAL WAIVERS

Inorganic chemical waivers from monitoring frequency requirements are available for public water suppliers who have completed three rounds of sampling and analyses. Public water suppliers may request a review of the inorganic chemical data to determine which inorganic chemicals may



be eligible for a waiver. **The request must be in writing.** The Department of Environmental Quality will conduct the review and make the determination of eligibility based on monitoring history, treatment requirements and the inorganic chemical drinking water quality.

Inorganic chemical monitoring waiver approval must be given in writing by the Department of Environmental Quality. The approval letter will specify which inorganic chemicals are included in the waiver, the time during which the waiver is in effect and sampling requirements necessary to renew the waiver. Inorganic chemical waivers are not available for arsenic, nitrate/nitrite, lead and copper or radiological monitoring. Sulfate is an unregulated contaminant that must be sampled only once.

## INTRODUCTION TO THE ORGANIC CHEMICAL MONITORING WAIVER PLAN

The United States Environmental Protection Agency (USEPA) has authorized states to issue monitoring waivers for the organic chemicals to systems that have completed an approved waiver application and review process. All public water supply systems in the state of Montana are eligible for consideration of monitoring waivers for the organic chemicals. The waiver process applies to all of the Phase II and Phase V organic chemicals with the exception of diquat, endothall, glyphosate, dioxin, ethylene dibromide (EDB) and dibromochloropropane (DBCP), which are included in the chemicals eligible for a statewide monitoring waiver.

### Types of Waivers:

Monitoring waivers will be determined on the basis of a vulnerability assessment (VA). The vulnerability of a water supply is dependent on the use of a particular contaminant in the area or the susceptibility of a water supply source to come in contact with or transport a contaminant. Monitoring frequency for the organic chemicals may be reduced by the successful application for a Use Waiver or a Susceptibility Waiver.

A Use Waiver may be allowed if through a vulnerability assessment it is determined that specific organic chemicals were not used, manufactured or stored in the area of a water source. If certain organic chemicals have been used, or if the use is unknown, the system would be determined to be vulnerable to organic chemical contamination and ineligible for a Use Waiver for those particular contaminants. If a Use Waiver is not granted, a system may still be eligible for a Susceptibility Waiver if through a vulnerability assessment it is demonstrated that the water source would not be susceptible to contamination. Susceptibility is based on prior analytical or vulnerability assessment results, environmental persistence and transport of the contaminant, natural protection of the source, wellhead protection program efforts, and the level of susceptibility indicators such as nitrate or coliform bacteria. **A waiver application package must be requested in writing.**

## G. RADIOLOGICAL CONTAMINANTS

### **Radiological Contaminants** -

The effects of human radiation exposure are viewed as harmful and any unnecessary exposure to ionizing radiation should be avoided. Community water supplies shall be analyzed every four years for radiological content. *It is the responsibility of the system owner/operator to sample for radiological contaminants.* A list of certified laboratories is enclosed.

TABLE III: MAXIMUM RADIOLOGICAL CONTAMINANT LEVELS	
Constituent	Level Pci per liter
Combined radium-226 and radium-228	
Gross alpha particle activity (including radium-226 and 228 but excluding radon and uranium)	5
Tritium ..... Only systems > 100,000 - N/A in Montana	15
Strontium-90 ..... Only systems > 100,000 - N/A in Montana	20,000
Gross beta radioactivity ..... Only systems > 100,000 - N/A in Montana	8
	50

## H. HOW TO COLLECT SAMPLES

### BACTERIOLOGICAL SAMPLING PROCEDURE FROM A POTABLE SUPPLY

- Select a sample tap from which to take the sample. Always sample from the cold water tap. If at all possible select a faucet that is:  
not leaking    non-swivel, non-mixing faucet    do not sample from drinking fountains or outside hydrants    avoid sample points located after water softeners, carbon filters, or cisterns serving single homes
- Remove any faucet attachments (aeration screens, hoses, etc)
- Open tap fully; let water run to waste for 2 or 3 minutes (sufficient time to allow flushing of the service line).  
  
if you must use a mixing faucet, run the hot water tap for 2 minutes and then run the cold water tap for 2-3 minutes (always collect cold water sample).
- Reduce the flow (to about the diameter of a pencil), and fill the bottle. Note: when flow pressure is reduced if the water dribbles to the faucet edge and contacts the metal of the faucet before entering the bottle, this may cause the sample to be contaminated with bacteria from the faucet. Adjust the flow or locate a different sampling tap.
- Collect the sample.

Do not open sample bottle until ready to fill. Grasping the bottle in one hand, remove the lid with the other and proceed to fill the bottle. Do not set the lid down on a table or turn upwards during collection. Do not contaminate the bottle by touching the inner surface of the bottle with

your finger or touching it to the faucet. Do not rinse the bottle before filling (white powder inside is sodium thiosulfate which neutralizes any chlorine in the water). Fill the bottle to the top of the label, or base of the neck. Leave an airspace which allows mixing by shaking at the lab.

6. Transport water sample to lab with shortest transit time possible. Try to maintain sample at normal water temperature.

samples must be received in the lab within 48 hours for coliform analysis samples for heterotrophic bacteria (HPC) analysis should be received in the lab within 8 hours (without refrigeration) and within 24 hours if packed on ice during transit.

## VOC SAMPLING PROCEDURES

The following are general procedures for sampling for VOCs and unregulated contaminants. It is important that the sampler discuss sampling procedures with the laboratory conducting the analysis. These sampling procedures assume that a preservative has been added to the sampling vials.

1. Fill in label completely with all relevant data (it is best to use a "waterproof" pen or marker).
2. Turn water on, let run for at least 5 minutes.
3. Fill vial slowly, being careful not to wash out the preservative in spiked vials.
4. Fill to the very top of the vial.
5. Fill the vial until there is a curved layer of water (sometimes called a meniscus) slightly above the rim of the vial.
6. All containers are capped with a teflon-lined septum. Place septum in the retainer ring (cap) so that when placed on the sample vial, the shiny side of the teflon will be in contact with the sample.
7. Tightly screw on lid.
8. It is very important that no air be trapped in the sample. To check sample, invert vial and tap the top. If an air bubble rises to the surface, do not empty contents. Emptying contents will also empty preservative. Remove cap and add enough water to displace air. Recap and make a final check of the sample.
9. Samples should be refrigerated and must be analyzed within 14 days if a preservative has been used. Again, check with the laboratory doing the analysis.
10. *Only laboratories certified by the State for VOC analysis can be used to determine compliance with the VOC regulations. Please choose a laboratory certified to perform VOC analysis from the enclosed Certified Montana Laboratories chart.*

## III. OTHER REQUIREMENTS

### A. SURFACE WATER TREATMENT RULE (SWTR)

This rule will affect only those public water supplies that use surface water, or those that have groundwater supplies that are directly influenced by surface water. If you use a surface water supply and we have not included a copy of the SWTR summary, please notify the Public Water Supply Section for a copy. **However, if you have a groundwater supply that may be directly influenced by surface water, you should request a copy of the Surface Water Treatment Rule summary by contacting the Public Water Supply Section.** The Public Water Supply Section will eventually assess all groundwater sources for surface water influence.

## B. EPA PUBLIC NOTIFICATION FOR PUBLIC WATER SYSTEMS



### OVERVIEW

With the enactment of the Safe Drinking Water Act (SDWA) in 1974, Congress required that public drinking water systems notify their customers when drinking water standards are violated.

On June 19, 1986, Congress amended the Act and, among other changes, directed the Environmental Protection Agency (EPA) to revise the public notification requirements. Congress also reaffirmed its position that public notification is an important responsibility of public water systems.

In response to this Congressional mandate, EPA, on October 28, 1987, published its revised, general public notification requirements, changing the way public drinking water systems are to issue notice. These requirements were effective April 28, 1989, and can be found in 40 Code of Federal Regulation (CFR) 141.32. Each state has adopted or will adopt requirements no less stringent than EPA's regulations. Contact your state primacy agency for specific requirements that apply in your state, or contact the Safe Drinking Water Hotline.

#### Safe Drinking Water Hotline

Hours: 8:30 a.m. - 4:30 p.m. EST  
Monday - Friday

 **1-800-426-4791**

### Purpose of Public Notification

The primary purpose of public notification is to inform consumers of any existing or potential adverse health effects related to their drinking water, and steps they can take to minimize the impact. Public notification also provides consumers with information that will encourage them to support the expenditures it will take to provide safe water. *More detailed information concerning the revised public notification requirements can be found in the handbook, "General Public Notification for Public Water Systems: (Publication Number EPA 570/9-88-002, September 1989). Copies may be purchased from the National Technical Information Service (NTIS), U.S. Dept. of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161. Phone: 1-800-336-4700 toll free to order.*

### WHO MUST GIVE THE PUBLIC NOTICE

- All public water systems (PWSs) must notify the public when the system violates a national primary drinking water regulation or receives and operates under a variance and/or an exemption. Contact primacy agent to determine your PWS type.
- The form and timing of the public notification depends on the type of violation or action and whether the public water system is a community water system (CWS) or non-community water system (NCWS). The type of violation determines the timing of the notice.
- In general, CWSs must provide in a newspaper and, for acute violations, provide notice to the local radio or TV stations. CWS must also give notice of Tier 1 violations to new billing units. NCWS will, in general, give the notice by continuous posting. All public water systems must use mandatory health effects language (see 40 CFR 141.32(e) for certain types of violations. Refer to the table on the following page, "Summary of Public Notice Requirements." \*
- A copy of any public notice given to comply with the above mentioned requirements must be submitted to the Public Water Supply Section within 10 days of its issuance.

## LEVELS OF VIOLATIONS / ACTIONS

### **Tier 1 Violations**

Tier 1 violations are the more serious and require substantial efforts at public notification. Tier 1 violations include:

- Failure to comply with a Maximum Contaminant Level (MCL)
- Failure to comply with a treatment technique requirement established in lieu of an MCL.
- Failure to comply with a schedule prescribed under a variance or exemption.

### **Tier 2 Violations**

Tier 2 violations are less serious and have simpler public notification requirements. Tier 2 violations include:

- Failure to comply with monitoring requirements
- Failure to comply with specified testing procedures
- Operating under a variance or an exemption

## EPA SUMMARY OF PUBLIC NOTICE REQUIREMENTS \*

Time Frame Within Which Notice Must be Given (Shaded Area indicates time frame for initial notice and is followed by the frequency of repeat notice until the violation is resolved)													
Violation Category Type	Mandatory <sup>6</sup> Health Effects Information Required (All PWSs)	Notice to New Billing Units (CWSs Only)	Type of PWSs	Violation	72 Hours	7 days	14 days	45 days	3 months	Annual			
TIER 1 1. MCL 2. Treatment Technique 3. Variance or Exemption Schedule Violation	Yes	Yes	Community	Acute Violations: <sup>7</sup>									
				TV and Radio			No Repeat						
				Newspaper <sup>1</sup>					No Repeat				
				Mail or Hand Delivery <sup>2</sup>						Quarterly Repeat			
				Non-Acute Violations:									
				Newspaper <sup>1</sup>									
				Mail or Hand Delivery <sup>2</sup>			Quarterly Repeat						
	Non-Community <sup>3</sup>	Option 1:											
		Acute/Non-Acute Violations											
		Notice as for Community Water Systems or											
		Option 2:											
		Acute Violations											
		Posting or Hand Delivery			Continuous/Quarter Repeat <sup>5</sup>								
		Non-Acute Violations											
		Posting or Hand Delivery			Continuous/Quarterly Repeat <sup>5</sup>								
TIER 2 1. Monitoring <sup>4</sup> 2. Testing Procedure 3. Variance or Exemption Issued	No	No	Community										
				Newspaper <sup>1</sup>							Quarterly Repeat by Mail or Hand Delivery		
	Yes	No	Non-Community <sup>3</sup>	Option 1:									
				Notice as for Community Water Systems or									
				Option 2:									
Posting or Hand Delivery								Continuous/Quarterly Repeat <sup>5</sup>					

### \* Footnotes

- <sup>1</sup> If no newspaper of general circulation is available, an alternate procedure providing for notice by posting or hand delivery within 72 hours for Tier 1 acute violations, 14 days for Tier 1 non-acute violations, and 3 months for Tier 2 violations should be followed.
- <sup>2</sup> May be waived by the state in writing if the violation has been corrected within the 45-day period.
- <sup>3</sup> Includes both transient non-community public water systems and non-transient non-community public water systems.
- <sup>4</sup> Less frequent (but no less than annual) notice can be allowed if state regulations providing for less frequent notice are approved by EPA.
- <sup>5</sup> If posting is used, the notice must be posted continuously for the duration of the violation or failure. If hand delivery is used, the notice must be repeated every 3 months for as long as the violation or failure exists.
- <sup>6</sup> Mandatory health effects language for contaminants is specified in the public drinking water regulations.
- <sup>7</sup> Acute violations are those which involve an acute risk to human health. Acute regulations are defined by the public notification regulations and currently include (1) any violations specified by the state as posing an acute risk to human health, (2) violations of the MCL for nitrate, (3) violations of the MCL for total coliforms when fecal coliforms or *E. coli* are present in the water distribution system (effective December 31, 1990), and (4) occurrence of a water-borne disease outbreak in an unfiltered system (effective December 31, 1990). Additional acute violations will be defined as new regulations are promulgated.



## TYPES OF PUBLIC NOTICE

Mail

Hand Delivery

Posting

Newspaper

TV-Radio

## CHECKLIST OF NOTICE CONTENTS

### ✓ The notice provides a clear and readily understandable explanation of the - -

- [1] violation/action
- [2] potential adverse health effects (mandatory health effects language found in Section 141.32(e), the federal public notice requirements.
- [3] population at risk
- [4] steps the system is taking to correct the violation
- [5] necessity of seeking alternative water supplies (if any)
- [6] preventive measures the consumer should take until the violation is corrected

### ✓ The notice

- [7] is clear and conspicuous in design
- [8] contains non-technical language
- [9] uses print that is easily read
- [10] content creates no problems that would frustrate the purpose of public notification
- [11] contains the telephone number of the owner, operator, or designee of the public water system as a source of additional information
- [12] contains multi-lingual information, where appropriate

June 1, 1989 <b>Amber Way Turnpike Authority</b>	
TURNPIKE WATER SYSTEM ENCOUNTERS DELAY IN LOWERING NITRATE LEVELS. SAMPLE: Posted Notice with Recommended Health Effects Language	
<b>WATER FROM THIS LOCATION SHOULD NOT BE GIVEN TO CHILDREN UNDER ONE YEAR OF AGE.</b>	
<b>SITUATION</b>	The Amber Way Turnpike Authority has announced a delay in installation of water treatment equipment for this rest stop. As a result:  <b>STOP:</b> Water available at this rest stop may be slightly higher in nitrates than recommended and should not be given to children under one year of age, or used in making baby formula.
<b>GENERAL INFORMATION</b>	Water measured at this rest stop contained 12 milligrams of nitrate per liter of water. That is slightly higher than the nitrate limit of 10 milligrams per liter, established by the State Health Department. The Turnpike Authority has ordered special water treatment equipment that is designed to lower nitrate levels, and was scheduled to have the equipment installed by June, 1889. The Turnpike Authority was granted an exemption by the State Health Department to meet that deadline. However, because of installation delays, the equipment will not be installed until August. An application has been made to the State Health Department to approve that schedule.
<b>HEALTH INFORMATION</b>	The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that nitrate poses an acute health concern at certain levels of exposure. This inorganic chemical is used in fertilizer, and is associated with sewage and wastes from farm animals. It generally gets into water from sewage or a result of agricultural fertilizing activity.  Excessive levels of nitrate in drinking water have caused serious illness (and sometimes death) in young children under one year of age. Infants are at the greatest risk. The serious illness in children is caused because nitrate is converted to nitrite in the body and nitrite interferes with the oxygen carrying capacity of the child's blood. This is an acute disease because the child can exhibit symptoms within hours of consuming water. Symptoms include shortness of breath and blueness of the skin. Clearly, expert, medical advice should be sought immediately if these symptoms occur. However, they do not always occur. The purpose of this notice is to encourage parents and other responsible parties to provide children with an alternate source of drinking water. Local and State health authorities are the best source for information concerning alternate sources of drinking water for infants. You will receive notice as soon a determination has been made that the drinking water is safe.  EPA has set the drinking water stand at 10 part per million (ppm) for nitrate to protect against the risk of these adverse effects. Drinking water which meets the EPA standard is associated with little to none of this risk and should be considered safe with respect to nitrate.
	<b>* Safe Water Available</b>  Low-nitrate safe water is available from the restaurant in the southeast corner of the rest-stop area.
<b>INFORMATION</b>	The Turnpike Authority regrets the inconvenience. If you have questions regarding nitrates or the schedule for completing this work, please contact:  Bob Paterson, Amber Way Turnpike Authority (417) 555-8686
	* [2] recommended health effects language. Substitute mandatory language when published

EXAMPLE OF A PUBLIC NOTICE
<p align="center"><i>(Name Of Your Water System)</i> <i>(Your City Here), Montana</i></p> <p align="center">NOTICE OF A VIOLATION FOR FAILURE TO SUBMIT BACTERIOLOGICAL SAMPLES</p> <p>The <i>(name of your system)</i> is required by state and federal regulations to test one sample per month for coliform bacteria. Because of an oversight on the part of the operator for the system a sample was not submitted for the month of <i>(month sample was missed)</i>. Since that time monthly samples have been submitted and the results have been satisfactory. It is our intent to comply with all regulations, and we will take measures to see that our bacteriological samples are submitted each month.</p> <p>If you have any questions or comments regarding this, matter, please contact John Doe, operator for the <i>(name of your system)</i> at <i>(system telephone number)</i>.</p>

**BACTERIOLOGICAL PUBLIC NOTICE EXAMPLE**

Content of public notice for failure to submit bacteriological samples must include the following information:

Identify the violation - Failure to submit bacteriological samples monthly as required by law.

Steps the system is taking to correct violation - List samples taken since that time and the results; or give your intent to comply with monitoring regulations in the future.

Include telephone number of the person to contact as source of additional information - This can be the number of the owner, operator or the Public Water Supply Section.

**COMMUNITY SYSTEMS must publish notice in the newspaper.**

\* *A copy of the notice as it appears in the newspaper with the date of publication or a copy of the posted notice must be mailed to our office.*

**C. OPERATOR CERTIFICATION**

Montana law (ARM 37-42-101) requires that persons in responsible charge of the operation and maintenance of community public water supplies become certified (licensed) as a system operator. Such licensing requires submittal of an application, satisfactory completion of an examination concerning water system principles and practices, and may require experience in the appropriate system type. For more information regarding this requirement, please contact the Certification Office at 406-444-2691.

**D. WATER SYSTEM IMPROVEMENTS AND PLAN REVIEW FEES**

A licensed professional engineer in accordance with DEQ-1 must design any installation, modification, alteration or extension to a community public water supply or wastewater system. All plans and specifications for such improvements must be reviewed and approved by the Public Water Supply Section prior to construction. The review of new community water systems now requires the applicant to address technical, managerial, operational, maintenance and financial capacity in accordance with Appendix A in DEQ-1. New groundwater sources must be evaluated for groundwater under the direct influence of surface water (PWS-5). All new sources must be properly assessed and located in accordance with PWS-6. A fee will be assessed for this review in accordance with the following fee schedule. For more information regarding this requirement of Montana law, please contact the Public Water Supply Section at (406) 444-4400 or write Department of Environmental Quality, Permitting & Compliance Division, Public Water Supply Section, Community Services Bureau, P.O. Box 200901, Helena, Montana 59620-0901.



**PLAN REVIEW FEES**

**SCHEDULE I ~ DEQ I**

Section 3.1 Surface water	
▪ .....quality and quantity	\$ 100
▪ .....structures	\$ 50
▪ Section 3.2 Groundwater	\$ 275
Section 4.1 Clarification	
▪ .....standard clarification	\$ 250
▪ .....solid contact units	\$ 500
Section 4.2 Filtration	
▪ .....rapid rate	\$ 625
▪ .....pressure filtration	\$ 475
▪ .....diatomaceous earth	\$ 475
▪ .....slow sand	\$ 475
▪ Section 4.3 Disinfection	\$ 100
▪ Section 4.4 Cation exchange softening	\$ 150
Section 4.5 Aeration	
▪ .....natural draft	\$ 100
▪ .....forced draft	\$ 100
Section 4.6 Iron and manganese	
▪ .....control-sequestering	\$ 100
Section 4.8 Stabilization	
▪ .....CO2 addition	\$ 150
Section 4.9 Taste and odor control	
▪ .....powdered activated carbon	\$ 100
Section 4.11 Waste disposal	
▪ .....alum sludge	\$ 125
▪ .....lime softening sludge	\$ 125
▪ .....red water waste	\$ 125
▪ Chapter 5 Chemical application	\$ 250
▪ Chapter 6 Pumping facilities	\$ 200
▪ Section 7.1 Plant storage	\$ 175
▪ Section 7.2 Hydropneumatic tanks	\$ 50
▪ Section 7.3 Distribution storage	\$ 175
Chapter 8 Distribution system	
▪ < 1320 lineal feet with standard spec	\$ 50
▪ < 1320 lineal feet without standard specs	\$ 225
▪ > 1320 lineal feet with standard specs	\$ 100
▪ > 1320 lineal feet without standard specs	\$ 275
▪ Main extension certified checklist	\$ 25

**SCHEDULE II ~ DEQ II**

Chapter 10 Engineering reports and facility plans	
▪ .....engineering reports (minor)	\$ 75
▪ .....comprehensive facility plan (major)	\$ 500
Chapter 30 Design of sewers	
▪ < 1320 lineal feet with standard spec	\$ 50
▪ < 1320 lineal feet without standard specs	\$ 225
▪ > 1320 lineal feet with standard specs	\$ 100

▪ > 1320 lineal feet without standard specs	\$ 275
▪ Sewer extension certified checklist	\$ 25
Chapter 40 Sewage pumping station	
▪ .....100 gpm or less	\$ 250
▪ .....greater than 100 gpm	\$ 500
▪ Chapter 60 Screening grit removal	\$ 500
▪ Chapter 70 Settling	\$ 400
▪ Chapter 80 Sludge handling	\$ 800
▪ Chapter 90 Biological treatment	\$ 1200
▪ .....on-aerated treatment ponds	\$ 400
▪ .....aerated treatment ponds	\$ 700
▪ Chapter 100 Disinfection	\$ 250
▪ Appendix A .....(per design)	\$ 350
▪ Appendix B .....(per design)	\$ 350
▪ Appendix C .....(per design)	\$ 350
▪ Appendix D .....(per design)	\$ 350

**SCHEDULE III ~ WQB IV & V**

▪ Chapter 20 Sewers	\$ 50
▪ Chapter 50 Septic tank	\$ 50
Chapter 30, 40 & 60 Subsurface treatment	
▪ .....gravity	\$ 150
▪ .....dosed	\$ 250
▪ Alternative on-site sewage treatment design requiring review for compliance with department circular .....(per design)	\$ 350

**SCHEDULE IV ~ DEQ III**

▪ Section 3.2 Groundwater	\$ 250
▪ Chapter 6 Pump facilities	\$ 100
▪ Chapter 8 Distribution system	\$ 100

**SCHEDULE V (no design standards)**

▪ Hypochlorinators	\$ 50
▪ Ozonators up to 10 gpm	\$ 150
▪ CT evaluations	\$ 100
▪ Reverse osmosis up to 10 gpm	\$ 100
▪ Spring box and collection lateral	\$ 100
▪ Cartridge/bag filters	\$ 150
▪ Plans and specifications not covered under Section (2)	
Hourly Fee = <b>\$26</b> (Maximum Fee = \$500)	
Total Hour(s) _____	Total Fee \$ _____

**E. SERVICE CONNECTION FEES**

A public water supply system must pay to the department an annual fee for each state fiscal year. Each community public water supply system supplier must determine the total number of active service connections for each fiscal year based on an assessment that occurs between July 1 and August 1 of that fiscal year. The annual fee must be postmarked or delivered to the department no later than March 1 of each year.

For purposes of this rule, an active service connection is one that provides water service for human consumption to a customer that is billed directly or otherwise held directly responsible by a public water supply system supplier for payment for that service. Activities that do not qualify as human consumption include water used exclusively by livestock or for fire protection.

The annual fee does not apply to a service connection if: the service connection has been turned off for the entire fiscal year prior to any March 1 fee payment deadline; and the public water supply system has not required payment for service for that time period. Each community public water supply system supplier must determine the total number of active service connections for each fiscal year based on an assessment that occurs between July 1 and August 1 of that fiscal year. The annual fee per active service connection is \$2.00. The total annual service connection fee is determined by multiplying the number of active service connections by the annual fee. Regardless of the number of service connections, the minimum annual fee for any community public water system is \$100.

Failure to pay the annual fee by March 1 of the fiscal year for which the fee is assessed subjects the system supplier to an additional charge to be calculated by multiplying the fee by 1.50% for each calendar month in which the fee is not paid.

**F. ADMINISTRATIVE PENALTIES**

Administrative penalties may be assessed for any violations of the Public Water Supply Act or failure to pay the Service Connection Fees.

## IV SUMMARY OF PUBLIC WATER SUPPLY MONITORING REQUIREMENTS

### A. PUBLIC WATER SUPPLY GROUNDWATER CHEMICAL MONITORING REQUIREMENTS

#### COMMUNITY WATER SYSTEMS WITH POPULATION < 10,000

These are the groundwater chemical monitoring requirements for community systems serving less than 10,000 population. Note that this table may not apply if your system has had other monitoring requirements imposed due to unfiltered water sources, monitoring failures, organic chemical detects, or maximum contaminant level, lead, copper or trigger level exceedances. New water sources must also be tested for chemicals not shown here. Statewide waivers have been granted for PCBs, EDB, DBCP, Cyanide, Endothall, Diquat, Glyphosate and Dioxin. Only systems with asbestos cement (A/C) pipe in the distribution system are required to test for asbestos. Bacteriological, asbestos, radiological, THM, lead and copper samples are taken in the distribution system; all other chemical samples are taken at each entry point after treatment. All laboratories are required by law to forward bacteriological results to the Department of Environmental Quality (DEQ). Systems must forward copies of chemical results to the DEQ. To save on the cost of testing, ask the laboratory to composite chemical samples whenever possible. Please call the Public Water Supply Section at 406-444-4400 if you have any questions.

CONTAMINANT	1996 THROUGH 1998 - SECOND COMPLIANCE PERIOD			1999 THROUGH 2001 - THIRD COMPLIANCE PERIOD			COMMENTS
	1996	1997	1998	1999	2000	2001	
MICROBIOLOGICAL	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY	SET UP AUTOMATIC BOTTLE MAILING EARLY IN THE MONTH SO YOU HAVE IT NECESSARY.
NITRATE	ANNUALLY	ANNUALLY	ANNUALLY	ANNUALLY	ANNUALLY	ANNUALLY	CONTACT YOUR LABORATORY AND TEST EVERY YEAR. ONE ANNUAL SAMPLE GREATER THAN 5.0 MG/L. IF THIS OCCURS, TESTING IS REQUIRED.
LEAD & COPPER TAP SAMPLES	SMALL SYSTEMS SAMPLE BETWEEN 6/1 AND 9/30	SMALL SYSTEMS SAMPLE BETWEEN 6/1 AND 9/30 <u>ONCE</u> DURING THIS THREE-YEAR PERIOD			SMALL SYSTEMS SAMPLE BETWEEN 6/1 AND 9/30 <u>ONCE</u> BEFORE THE END OF 2002		THIS SCHEDULE APPLIES ONLY TO TRIENNIAL MONITORING. SMALL SYSTEMS POPULATION; MEDIUM SYSTEMS ARE REQUIRED TO TEST FOR LEAD AND COPPER AT EACH PERIOD. BE SURE YOU SEND RESULTS WITH THE LEAD AND COPPER MONITORING.
	MEDIUM SYSTEMS SAMPLE BETWEEN 6/1 AND 9/30 <u>ONCE</u> THIS 3 YEAR PERIOD			MEDIUM SYSTEMS SAMPLE BETWEEN 6/1 AND 9/30 <u>ONCE</u> THIS 3 YEAR PERIOD			
PHASE II & V SOCs, PESTICIDES & HERBICIDES	COMPLETE ONE SET THIS COMPLIANCE PERIOD			COMPLETE ONE SET THIS COMPLIANCE PERIOD			THESE CHEMICALS ARE ORGANIC CHEMICALS. AFTER THE INITIAL SET OF MONITORING, TEST EVERY THREE YEARS IF THERE ARE NO DETECTS.
PHASE II & V VOCs	ONE VOC TEST ANNUALLY	ONE VOC TEST ANNUALLY	ONE VOC TEST ANNUALLY	IF NO DETECTS, ONE SET PER COMPLIANCE PERIOD FOR GROUNDWATER SOURCES			THESE CHEMICALS ARE ORGANIC CHEMICALS. GROUNDWATER SYSTEMS ARE REQUIRED TO TEST FOR MONITORING AFTER THREE ANNUAL PREVIOUS DETECTS.
PHASE II & V INORGANICS INCLUDING ARSENIC	ONE SET PER COMPLIANCE PERIOD FOR GROUNDWATER SOURCES			ONE SET PER COMPLIANCE PERIOD FOR GROUNDWATER SOURCES			INORGANIC CHEMICAL WAIVERS MAY BE GRANTED. SEND A WRITTEN REQUEST TO THE PUBLIC WATER SUPPLY PROGRAM, DEPARTMENT OF ENVIRONMENTAL QUALITY, 200901, HELENA MT 59620-0901.
RADIONUCLIDES	RADIONUCLIDES ONCE EVERY 4 YEARS (CHECK YOUR RECORDS TO SEE WHEN YOU LAST SAMPLED)						RADIONUCLIDES ARE REQUIRED ONCE EVERY 4 YEARS. DATE OF YOUR LAST ANALYSIS. CALL 4489 OR INTER-MOUNTAIN LABORATORY FOR BOTTLE.

## SUMMARY OF PUBLIC WATER SUPPLY MONITORING REQUIREMENTS

### B. PUBLIC WATER SUPPLY SURFACE WATER CHEMICAL MONITORING REQUIREMENTS

#### COMMUNITY WATER SYSTEMS WITH POPULATION < 10,000

These are the surface water chemical monitoring requirements for community systems serving less than 10,000 population. Note that this table may not apply if your system has had other monitoring requirements imposed due to unfiltered water sources, monitoring failures, organic chemical detects, or maximum contaminant level, lead, copper or trigger level exceedances. New water sources must also be tested for chemicals not shown here. Statewide waivers have been granted for PCBs, EDB, DBCP, Cyanide, Endothall, Diquat, Glyphosate and Dioxin. Only systems with asbestos cement (A/C) pipe in the distribution system are required to test for asbestos. Bacteriological, asbestos, radiological, THM, lead and copper samples are taken in the distribution system; all other chemical samples are taken at each entry point after treatment. All laboratories are required by law to forward bacteriological results to the Department of Environmental Quality (DEQ). Systems must forward copies of chemical results to the DEQ. To save on the cost of testing ask the laboratory to composite chemical samples whenever possible. Please call the Public Water Supply Section at 406-444-4400 if you have any questions.

CONTAMINANT	1996 THROUGH 1998 - SECOND COMPLIANCE PERIOD			1999 THROUGH 2001 - THIRD COMPLIANCE PERIOD			COMMENTS
	1996	1997	1998	1999	2000	2001	
MICROBIOLOGICAL	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY	SET UP AUTOMATIC BOTTLE SAMPLER EARLY IN THE YEAR TO BEGIN SAMPLING IF NECESSARY
NITRATE	ANNUALLY	ANNUALLY	ANNUALLY	ANNUALLY	ANNUALLY	ANNUALLY	CONTACT YOUR LABORATORY TO SAMPLE BOTTLE EVERY YEAR. UNLESS THE RESULT IS ABOVE MCL, QUARTERLY SAMPLING IS REQUIRED
LEAD & COPPER TAP SAMPLES	SMALL SYSTEMS BETWEEN 6/1 AND 9/30	SMALL SYSTEMS SAMPLE BETWEEN 6/1 AND 9/30 <u>ONCE</u> DURING THIS THREE-YEAR PERIOD			SMALL SYSTEMS SAMPLE BETWEEN 6/1 AND 9/30 <u>ONCE</u> BEFORE THE END OF 2002		THIS SCHEDULE APPLIES TO SYSTEMS QUALIFIED FOR TRIENNIUM MONITORING DEFINED AS LESS THAN 10,000. CONTACT YOUR LABORATORY TO BE SURE YOU SEND A COMPOSITE LEAD AND COPPER SAMPLE
	MEDIUM SYSTEMS SAMPLE BETWEEN 6/1 AND 9/30 <u>ONCE</u> THIS 3 YEAR PERIOD			MEDIUM SYSTEMS SAMPLE BETWEEN 6/1 AND 9/30 <u>ONCE</u> THIS 3 YEAR PERIOD			
PHASE II & V SOCs, PESTICIDES & HERBICIDES	COMPLETE ONE SET THIS COMPLIANCE PERIOD			COMPLETE ONE SET THIS COMPLIANCE PERIOD			THESE CHEMICALS ARE REQUIRED BY THE PHASE II & V RULE. REQUIRED EVERY THREE YEARS
PHASE II & V VOCs	ONE VOC TEST ANNUALLY	ONE VOC TEST ANNUALLY	ONE VOC TEST ANNUALLY	ONE VOC TEST ANNUALLY	ONE VOC TEST ANNUALLY	ONE VOC TEST ANNUALLY	THESE CHEMICALS ARE REQUIRED BY THE PHASE II & V RULE
PHASE II & V INORGANICS INCLUDING ARSENIC	ANNUALLY	ANNUALLY	ANNUALLY	ANNUALLY	ANNUALLY	ANNUALLY	NORGANIC CHEMICALS ARE REQUIRED BY THREE ROUNDS OF SAMPLING. CONTACT CRAIG PAGEL, PUBLIC WATER SECTION OF ENVIRONMENTAL QUALITY DEPARTMENT 0901.
TRICHALOMETHANES	QUARTERLY OR ANNUALLY						UNFILTERED SURFACE WATER. SEE ARM 17.38.216 (3) FOR WATER TREATMENT REQUIREMENTS
RADIONUCLIDES	RADIONUCLIDES ONCE EVERY 4 YEARS (CHECK YOUR RECORDS TO SEE WHEN YOU LAST SAMPLED)						RADIONUCLIDES ARE REQUIRED BY THE DEQ. CHECK THE DATE OF YOUR LAST SAMPLE. LABORATORIES AT 800-444-4400

September 21, 1999

V. CERTIFIED MONTANA LABORATORIES	CERTIFIED FOR					
LABORATORIES	MICROBIOLOGICAL	NITRATES	INORGANIC	SOCs <sup>1</sup>	RAD	VOCs <sup>2</sup>
Department of Public Health & Human Services Environmental Lab Cogswell Building, Room B219 1400 Broadway - P.O. Box 4369 Helena MT 59620-4369 Phone: 444-2642	♦	♦	♦	♦		♦
Montana Environmental Lab 376 West Washington - P.O. Box 8900 Kalispell MT 59901 Phone: 755-2131	♦	♦				
Montana Environmental Lab 920 Technology Blvd Bozeman MT 59715 Phone: 582-1886	♦					
Montana Microbiological Services 2010 N. 7th Avenue PO Box 4570 Bozeman MT 59715 Phone: 586-5590	♦					
Missoula City-County Health Dept. 301 West Alder Missoula MT 59801 Phone: 523-4755	♦					
AMATEC P.O. Box 20873 Billings MT 59104 Phone: 248-2159	♦					
Hagen Water Laboratory P.O. Box 1205 • 505 W. Main St., Suite 320 Lewistown MT 59457 Phone: 538-6988 or 538-7559	♦					
Energy Laboratories, Inc. 1077 South Broadway - P.O. Box 30916 Billings MT 59107-0916 Phone: 252-6325 or 1-800-735-4489	♦	♦	♦	♦	♦	♦
MSE, Inc. 106 South Parkmont Industrial Park - Analytical Laboratory Butte MT 59701 Phone: 494-1403	♦	♦	♦			
Crane Laboratory P.O. Box 105 Crane, MT 59217 Phone: 482-8714	♦					
Maxim 600 South 25th Street - P.O. Box 30615 Billings MT 59107 Phone: 248-9161		♦	♦	■		♦
Montana Bureau of Mines Montana College of Mineral Science & Technology Analytical Division Butte MT 59701 Phone: 496-4164		♦	■			
City of Billings Public Utilities Department Laboratory Highway 87 East - P.O. Box 30958 Billings MT 59111 Phone: 657-8353		♦	■			
Peak Analytical Services, Inc. 2010 North Seventh Avenue Bozeman MT 59111 Phone: 585-8160		♦	♦			
RD Water Lab P.O. Box 5064 Missoula MT 59068 Phone: 721-8179	♦					
Little Bear Laboratories, INC. P.O. Box 1434 • 22 S. Broadway, Suite B Red Lodge MT 59068 Phone: 446-3648		♦	■			
<div> <div>♦ Fully certified</div> <div>■ Not certified for ALL required tests in this category</div> </div> <div> <sup>1</sup>. SOCs are synthetic organic chemicals (pesticides, etc.)  <sup>2</sup>. VOCs are volatile organic chemicals (solvents, etc.)         </div> <div>(This list is subject to change without notification and will be updated as laboratories obtain certification)</div>						